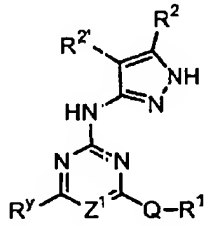
Applicants: David Bebbington, et al.
Application No.: 10/775,699

IN THE CLAIMS:

Please replace all prior versions and listings of claims with the currently amended claims as follows.

Claim 1. (Currently amended) A compound of formula II:



II

or a pharmaceutically acceptable salt thereof, wherein:

Z^1 is CR^8;

R^y is $Z\text{-}R^{3'}$ or an optionally substituted group selected from $C_{1\text{-}6}$ aliphatic, $C_{6\text{-}10}$ aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms, or R^y and R^8 are taken together to form a fused, optionally substituted ~~5-7 membered, unsaturated or partially unsaturated, ring having 0-3 ring heteroatoms selected from nitrogen, oxygen, or sulfur~~ benzo ring;

Q is selected from $-N(R^4)-$, -O-, –S-, or $-CH(R^{5'})-$;

R^1 is T-(Ring D);

Ring D is a 6-7 membered monocyclic ring or 8-10 membered bicyclic ring selected from aryl, heteroaryl, heterocyclyl or carbocyclyl, said heteroaryl or heterocyclyl ring having 1-4 ring heteroatoms selected from nitrogen, oxygen or sulfur, wherein each substitutable ring carbon of Ring D is independently substituted by oxo, $T\text{-}R^5$, or $V\text{-}Z\text{-}R^5$, and each substitutable ring nitrogen of Ring D is independently substituted by $-R^4$;

T is a valence bond or a $C_{1\text{-}4}$ alkylidene chain, wherein when Q is $-CH(R^6)-$, a methylene unit of said $C_{1\text{-}4}$ alkylidene chain is optionally replaced by -O-, -S-, $-N(R^4)-$, -CO-, -CONH-, -NHCO-, $-SO_2-$, $-SO_2NH-$, $-NHSO_2-$, $-CO_2-$, -OC(O)-, -OC(O)NH-, or $-NHCO_2-$;

Z is a $C_{1\text{-}4}$ alkylidene chain;

R^2 and $R^{2'}$ are independently selected from -R, $-T\text{-}W\text{-}R^6$, or R^2 and $R^{2'}$ are taken together with their intervening atoms to form a fused, 5-8 membered, unsaturated or partially unsaturated, ring having 0-3 ring heteroatoms selected from nitrogen, oxygen, or sulfur, wherein each substitutable ring carbon of said fused ring formed by R^2 and $R^{2'}$ is

independently substituted by halo, oxo, -CN, $-NO_2$, $-R^7$, or $-V-R^6$, and each substitutable ring nitrogen of said ring formed by R^2 and $R^{2'}$ is independently substituted by R^4;

$R^{3'}$ is selected from -halo, -OR, -C(=O)R, $-CO_2R$, -COCOR, $-COCH_2COR$, $-NO_2$, -CN, -S(O)R, $-S(O)_2R$, -SR, $-N(R^4)_2$, $-CON(R^7)_2$, $-SO_2N(R^7)_2$, $-OC(=O)R$, $-N(R^7)COR$, $-N(R^7)CO_2(C_{1-6}$ aliphatic), $-N(R^4)N(R^4)_2$, $-C=NN(R^4)_2$, -C=N-OR, $-N(R^7)CON(R^7)_2$, $-N(R^7)SO_2N(R^7)_2$, $-N(R^4)SO_2R$, $-OC(=O)N(R^7)_2$, or an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms;

each R is independently selected from hydrogen or an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms;

each R^4 is independently selected from $-R^7$, $-COR^7$, $-CO_2$(optionally substituted C_{1-6} aliphatic), $-CON(R^7)_2$, or $-SO_2R^7$;

each R^5 is independently selected from -R, halo, -OR, -C(=O)R, $-CO_2R$, -COCOR, $-NO_2$, -CN, -S(O)R, $-SO_2R$, -SR, $-N(R^4)_2$, $-CON(R^4)_2$, $-SO_2N(R^4)_2$, $-OC(=O)R$, $-N(R^4)COR$, $-N(R^4)CO_2$(optionally substituted C_{1-6} aliphatic), $-N(R^4)N(R^4)_2$, $-C=NN(R^4)_2$, -C=N-OR, $-N(R^4)CON(R^4)_2$, $-N(R^4)SO_2N(R^4)_2$, $-N(R^4)SO_2R$, or $-OC(=O)N(R^4)_2$;

V is $-O-$, -S-, -SO-, $-SO_2-$, $-N(R^6)SO_2-$, $-SO_2N(R^6)-$, $-N(R^6)-$, -CO-, $-CO_2-$, $-N(R^6)CO-$, $-N(R^6)C(O)O-$, $-N(R^6)CON(R^6)-$, $-N(R^6)SO_2N(R^6)-$, $-N(R^6)N(R^6)-$, $-C(O)N(R^6)-$, $-OC(O)N(R^6)-$, $-C(R^6)_2O-$, $-C(R^6)_2S-$, $-C(R^6)_2SO-$, $-C(R^6)_2SO_2-$, $-C(R^6)_2SO_2N(R^6)-$, $-C(R^6)_2N(R^6)-$, $-C(R^6)_2N(R^6)C(O)-$, $-C(R^6)_2N(R^6)C(O)O-$, $-C(R^6)=NN(R^6)-$, $-C(R^6)=N-O-$, $-C(R^6)_2N(R^6)N(R^6)-$, $-C(R^6)_2N(R^6)SO_2N(R^6)-$, or $-C(R^6)_2N(R^6)CON(R^6)-$;

W is $-C(R^6)_2O-$, $-C(R^6)_2S-$, $-C(R^6)_2SO-$, $-C(R^6)_2SO_2-$, $-C(R^6)_2SO_2N(R^6)-$, $-C(R^6)_2N(R^6)-$, -CO-, $-CO_2-$, $-C(R^6)OC(O)-$, $-C(R^6)OC(O)N(R^6)-$, $-C(R^6)_2N(R^6)CO-$, $-C(R^6)_2N(R^6)C(O)O-$, $-C(R^6)=NN(R^6)-$, $-C(R^6)=N-O-$, $-C(R^6)_2N(R^6)N(R^6)-$, $-C(R^6)_2N(R^6)SO_2N(R^6)-$, $-C(R^6)_2N(R^6)CON(R^6)-$, or $-CON(R^6)-$;

each R^6 is independently selected from hydrogen or an optionally substituted C_{1-4} aliphatic group, or two R^6 groups on the same nitrogen atom are taken together with the nitrogen atom to form a 5-6 membered heterocyclyl or heteroaryl ring;

each R^7 is independently selected from hydrogen or an optionally substituted C_{1-6} aliphatic group, or two R^7 on the same nitrogen are taken together with the nitrogen to form a 5-8 membered heterocyclyl or heteroaryl ring; and

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R^8 is selected from -R, halo, -OR, -C(=O)R, $-CO_2R$, -COCOR, $-NO_2$, -CN, -S(O)R, $-SO_2R$, -SR, $-N(R^4)_2$, $-CON(R^4)_2$, $-SO_2N(R^4)_2$, -OC(=O)R, $-N(R^4)COR$, $-N(R^4)CO_2$(optionally substituted C_{1-6} aliphatic), $-N(R^4)N(R^4)_2$, $-C=NN(R^4)_2$, -C=N-OR, $-N(R^4)CON(R^4)_2$, $-N(R^4)SO_2N(R^4)_2$, $-N(R^4)SO_2R$, or $-OC(=O)N(R^4)_2$; provided that when Q is -NH- and R^y and R^8 are taken together, R^1 is other than pyrazol-3-yl or a bicyclic ring system containing said pyrazol-3-yl ring.

Claims 2-7. (Canceled).

Claims 8. (Currently amended) The compound according to claim 1, wherein said compound has one or more features selected from the group consisting of:

(a) R^y is $Z\text{-}R^{3'}$ or an optionally substituted group selected from C_{1-6} aliphatic, 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl, wherein Z is a methylene and $R^{3'}$ is $-N(R^4)_2$, -OR., or an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms;

(b) R^1 is T-(Ring D), wherein T is a valence bond or a methylene unit;

(c) Ring D is a ~~a~~-6-7 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and

(d) R^2 is –R or –T-W-R^6 and $R^{2'}$ is hydrogen, or R^2 and $R^{2'}$ are taken together to form an optionally substituted benzo ring.

Claim 9. (Previously presented) The compound according to claim 8, wherein:

(a) R^y is $Z\text{-}R^{3'}$ or an optionally substituted group selected from C_{1-6} aliphatic, 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl, wherein Z is a methylene and $R^{3'}$ is $-N(R^4)_2$, -OR., or an optionally substituted group selected from C_{1-6} aliphatic, C_{6-10} aryl, a heteroaryl ring having 5-10 ring atoms, or a heterocyclyl ring having 5-10 ring atoms;

(b) R^1 is T-(Ring D), wherein T is a valence bond or a methylene unit;

(c) Ring D is a 6-7 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and

(d) R^2 is –R or –T-W-R^6 and $R^{2'}$ is hydrogen, or R^2 and $R^{2'}$ are taken together to form an optionally substituted benzo ring.

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Claims 10. (Previously presented) The compound according to claim 8, wherein said compound has one or more features selected from the group consisting of:

(a) R^y is an optionally substituted group selected from C_{1-6} aliphatic, 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl;

(b) R^1 is T-(Ring D), wherein T is a valence bond, and Q is -S-, -NH-, or $-CH_2-$;

(c) Ring D is a 6 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and

(d) R^2 is –R and $R^{2'}$ is hydrogen, wherein R is selected from hydrogen, C_{1-6} aliphatic, phenyl, a 5-6 membered heteroaryl ring, or a 5-6 membered heterocyclic ring.

Claim 11. (Previously presented) The compound according to claim 10, wherein:

(a) R^y is an optionally substituted group selected from C_{1-6} aliphatic, 5-6 membered heterocyclyl, phenyl, or 5-6 membered heteroaryl;

(b) R^1 is T-(Ring D), wherein T is a valence bond, and Q is -S-, -NH-, or $-CH_2-$;

(c) Ring D is a 6 membered monocyclic or an 8-10 membered bicyclic aryl or heteroaryl ring; and

(d) R^2 is –R and $R^{2'}$ is hydrogen, wherein R is selected from hydrogen, C_{1-6} aliphatic, phenyl, a 5-6 membered heteroaryl ring, or a 5-6 membered heterocyclic ring.

Claim 12. (Currently amended) The compound according to claim 10, wherein said compound has one or more features selected from the group consisting of:

(a) R^y is selected from 2-pyridyl, 4-pyridyl, pyrrolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, cyclopropyl, isopropyl, t-butyl, alkoxyalkylamino, alkoxyalkyl, alkyl- or dialkylamino, alkyl- or dialkylaminoalkoxy, acetamido, optionally substituted phenyl, or methoxymethyl, or R^y and R^8 are taken together to form ~~a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen, or sulfur~~benzo ring;

(b) R^1 is T-(Ring D), wherein T is a valence bond and Ring D is a 6 membered aryl or heteroaryl ring, wherein Ring D is optionally substituted with one to two groups selected from -halo, -CN, $-NO_2$, $-N(R^4)_2$, optionally substituted C_{1-6} aliphatic group, -OR, $-CO_2R$, $-CONH(R^4)$, $-N(R^4)COR$, $-N(R^4)SO_2R$,

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$-N(R^6)COCH_2CH_2N(R^4)_2$, or $-N(R^6)COCH_2CH_2CH_2N(R^4)_2$, and Q is -S- or -NH-; and

(c) R^2 is hydrogen or a substituted or unsubstituted C_{1-6} aliphatic~~, and~~.

Claim 13. (Currently amended) The compound according to claim 12, wherein:

(a) R^y is selected from 2-pyridyl, 4-pyridyl, pyrrolidinyl, piperidinyl, morpholinyl, piperazinyl, methyl, ethyl, cyclopropyl, isopropyl, t-butyl, alkoxyalkylamino, alkoxyalkyl, alkyl- or dialkylamino, alkyl- or dialkylaminoalkoxy, acetamido, optionally substituted phenyl, or methoxymethyl, or R^y and R^8 are taken together to form ~~a 5-6 membered unsaturated or partially unsaturated ring having 0-2 heteroatoms selected from nitrogen, oxygen, or sulfur~~benzo ring;

(b) R^1 is T-(Ring D), wherein T is a valence bond and Ring D is a 6 membered aryl or heteroaryl ring, wherein Ring D is optionally substituted with one to two groups selected from -halo, -CN, $-NO_2$, $-N(R^4)_2$, optionally substituted C_{1-6} aliphatic group, -OR, $-CO_2R$, $-CONH(R^4)$, $-N(R^4)COR$, $-N(R^4)SO_2R$, $-N(R^6)COCH_2CH_2N(R^4)_2$, or $-N(R^6)COCH_2CH_2CH_2N(R^4)_2$, and Q is -S- or -NH-; and

(c) R^2 is hydrogen or a substituted or unsubstituted C_{1-6} aliphatic~~, and~~.

Claim14. (Previously presented) A compound selected from the group consisting of:

6-Benzyl-*N*^{4}-(1*H*-indazol-6-yl)-*N*^{2}-(5-methyl-1*H*-pyrazol-3-yl)-pyrimidine-2,4-diamine;

6-Methyl-*N*^{2}-(5-methyl-1*H*-pyrazol-3-yl)-*N*^{4}-pyridine-3-ylmethyl-pyrimidine-2,4-diamine;

N-(4-{2-(5-Methyl-1*H*-pyrazol-3-ylamino)-6-[(pyridin-3-ylmethyl)-amino]-pyrimidin-4-ylamino}-phenyl)-methanesulfonamide;

N^2-(5-Cyclopropyl-1*H*-pyrazol-3-yl)-*N*^{4}-(2-methoxy-ethyl)-6-(thiophen-2-ylmethylsulfanyl)-pyrimidine-2,4-diamine;

[4-(Benzothiazol-6-ylsulfanyl)-6-(3-dimethylamino-propoxy)-pyrimidin-2-yl]-(5-cyclopropyl-1*H*-pyrazol-3-yl)-amine;

N-(4-[2-(5-Cyclopropyl-1*H*-pyrazol-3-ylamino)-6-(1-methyl-piperidin-4-yloxy)-pyrimidin-4-ylsulfanyl]-phenyl}-acetamide;

N-{4-[2-(5-Methyl-1*H*-pyrazol-3-ylamino)-quinazolin-4-ylsulfanyl]-phenyl}-acetamide;

[4-(Benzothiazol-6-ylsulfanyl)-quinazolin-2-yl-(5-methyl-1*H*-pyrazol-3-yl)-amine;

{4-[2-(5-Cyclopropyl-1*H*-pyrazol-3-ylamino)-quinazolin-4-yloxy]-phenyl}-acetonitrile;

(5-Cyclopropyl-1*H*-pyrazol-3-yl)-[4-(3-methoxy-benzyl)-quinazolin-2-yl]-amine;

N^2-(1*H*-Indazol-6-yl)-N^4-pyridin-3-ylmethyl-quinazoline-2,4-diamine; and

(4-(Benzyloxy-quinazolin-2-yl-(1*H*-indazol-3-yl)-amine.

Claim 15. (Original) A composition comprising a compound according to any one of claims 1-14, and a pharmaceutically acceptable carrier.

Claim 16. (Original) The composition according to claim 15, further comprising an additional therapeutic agent.

Claims 17-34. (Canceled)